Art. VII.—On Some New Species of Victorian Mollusca, No. 4.

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(Plates XX. and XXI.)

[Read 14th June, 1900.]

As we have already published a number of papers under the above title, without any distinguishing number other than the date of reading and of publication, we have thought it advisable to refer to them in this place with a distinguishing number to prevent any confusion in reference in the future.

No. 1.—On a New Species of Victorian Mollusc (Coralliophila wilsoni). Published May, 1898.

No. 2.—On Some New Species of Victorian Mollusca. Published February, 1899.

No. 3.—On Some New Species of Victorian Mollusca. Published August, 1899.

The present paper includes descriptions and figures of the following species:—

Natica shorehami, sp. nov.

Natica subcostata, T. Woods, with operculum.

Erato denticulata, sp. nov.

Turbonilla (Ondina) micra, sp. nov.

Turbonilla brevis, sp. nov.

Odostomia metcalfei, sp. nov.

Stylifer immaculata, sp. nov.

Marginella whani, sp. nov.

We have to express our thanks and indebtedness to Mr. F. E. Grant for the drawings of these shells.

Natica shorehami, sp. nov. (Pl. XX., Fig. 4.)

Shell very small, solid, conoidally globose, whorls $3\frac{1}{2}$, smooth, excepting at the upper portion of the whorls immediately below the suture, where there are slight radiating grooves, suture defined, spire very short.

Umbilicus covered with a pad that almost fills the umbilical area, the pad sinuously extends to the posterior junction of the columella and outer lip, and is not divided. Aperture lunarovate.

Type, white, with a few slight irregular light brown maculations on the body whorl near the outer lip, another specimen has three encircling rows of dots on the body whorl, and the shell has a light violet tint.

Dimensions of Type.—Height, 4 mm.; breadth, 4 mm.

Locality.—Schnapper Point and Portsea, Port Phillip; Shoreham and San Remo, Western Port.

Observations.—Type in Mr. Gatliff's collection.

Natica subcostata, T. Wds.¹ (Pl. XX., Figs. 1, 2, 3.)

Shell small, rather thin, globosely turbinate; whorls, 4; smooth, excepting at the upper portion of the whorls immediately below the well defined suture, radiating from which is a continuous series of strongly defined grooves following at somewhat irregular distances, the width between each groove being about three times the width of the groove in the penultimate and ante-penultimate whorls, these grooves extend almost across the whorls, the area near the suture traversed by them on the body whorl is rather depressed. Spire short. Outer lip semicircular; inner lip somewhat straight. Deeply umbilicated. Columella somewhat thin, with a very small, narrow, slightly concave callosity entering the centre of the umbilical area. White, covered with a thin, pale straw coloured epidermis.

Operculum, calcareous, semilunate, very slightly smaller than the aperture, nucleus small, eccentric anteriorly; outer surface of the operculum slightly concave, somewhat irregularly spirally grooved, one prominent groove in juxtaposition to the outer margin, but two more strongly defined at a short distance from the margin; a slight radial marking is also present, showing most distinctly as a slight crenulation at the outer margin.

Dimensions of Operculum.—Antero-posterior diameter, 3 mm.; breadth, 2 mm.; pertaining to a shell of length, 4 mm., by about the same breadth.

¹ Proc. Linn. Soc. N. S. Wales, 1878, p. 263.

Dimensions of Shell Figured.—Height, 6 mm.; breadth, 6 mm. Locality.—Dredged in five fathoms, sandy mud, off Phillip Island, Western Port, by C. J. Gabriel.

Observations.—Mr. Charles Hedley kindly compared our specimens with the type in the Australian Museum, Sydney, and considers them identical, with the exception that ours is rather larger and has half a whorl more.

Erato denticulata, sp. nov. (Pl. XX., Fig. 5.)

Shell pyriform, somewhat solid, with a high shoulder and prominent but somewhat small spire.

In addition to the embryonic portion, consisting of about one-and-a-half smooth whorls, there are usually three or four succeeding convex whorls, each whorl enveloping the previous one to such an extent that the suture is not very distinct. Body whorl gradually and evenly tapering to the relatively broad anterior end; but the dorsal aspect shows a slight concavity in the slope just before reaching the anterior extremity. surface smooth and lustrous. Aperture long and narrow, being of greatest width a little below half its length; outer lip strongly thickened and inflected, the thickening commencing at the end twist of the columella, running round the broadly open anterior canal, thence ascending a little more than half way above the suture of the penultimate whorl; outer lip regularly and uniformly denticulate within; columella with about three strong plaits, two prominent denticles at the posterior end of the inner lip, whilst the whole space between is regularly and minutely Shell opaque, milky white in colour, but some denticulate. examples are somewhat translucent through the thin part of the body whorl; a thin band of a violet-brown colour encircles the shell on the shoulder a little below the suture, and terminates at the thickening of the outer lip, there is also a small streak of the same colour about half way down the slope of the body whorl, and another in the concavity behind the thickened margin of the anterior end, this latter sometimes extends round to the columella.

Dimensions.—Length, 5 mm.; breadth, 3.25 mm.; length of aperture, 4.25 mm.; breadth of aperture, 5 mm. The foregoing

are the measurements of the type. We have other examples ranging to length, 6 mm.; breadth, 4 mm.

Locality.—San Remo, Western Port; Otway coast, between Ryan's Den and Moonlight Head, (Mr. P. J. Fulton).

Observations.—Though this shell was first known to Mr. Gatliff from San Remo, we have obtained many additional examples through the kindness of Mr. S. W. Fulton, whose brother collected them at the above mentioned locality. This species has already been referred to under manuscript name in Part III. of our catalogue of Victorian shells. The present species is a larger form than Tate's Erato bimaculata, and also differs from that species in its longer spire, lower shoulder, apertural characters and colour markings. We have an example, probably, representing this species, from St. Vincent's Gulf, South Australia, collected by G. B. Pritchard; but the South Australian shell presents these characters; it is much thinner, narrower, and more translucent, the outer lip is thinner and narrower, and the body whorl shows fine striae of growth; these features, however, are only what might be expected from well grown, but still immature, examples.

Type in Mr. Gatliff's collection.

Turbonilla (Ondina) micra, sp. nov. (Pl. XXI., Fig. 1.)

Shell minute, bulimoid, consisting of an apparently smooth embryo of about a whorl and a half, the axis of enrolment of which makes a slight angle with the axis of enrolment of the shell, succeeded by three to four whorls. The embryo, magnified 70 diameters, shows distinctly pitted spiral grooves.

Whorls only slightly convex, with a fairly impressed suture; the whorls are sculptured by very fine regular spiral lines, but the presence of pitting along these cannot always be detected with an ordinary lens, higher magnification, however, reveals their presence.

Aperture a little longer than a third the length of the shell, of an elongate oval shape, and broadly rounded at the anterior end, where it appears slightly effuse. Columella twisted, inner lip reflected over a slight umbilical chink. Outer lip with a thin sharp edge, but thicker within, and shows a distinct flattening, or even slight concavity, as it ascends to join the suture. The shell is of a white colour, and none of the specimens hitherto examined show any indication of the presence of any other colour markings.

Dimensions.—Length, 1.5 mm. to about 2 mm.; breadth, .5 mm to .75 mm.; length of aperture, about .75 mm.

Locality.—Off Rhyll, Phillip Island, Western Port, obtained from shell sand dredgings, from about 4 fathoms (Gatliff and Gabriel).

Observations.—Type in Mr. Gatliff's private collection. This little species in many respects recalls Turbonilla casta, A. Adams, being of a somewhat similar habit; but the uniformity of its characters and size, exhibited by a fair series of specimens, preclude the possibility of it being a young representative of that species.

Turbonilla brevis, sp. nov. (Pl. XXI., Fig. 4.)

Shell very small and pupiform, consisting of a smooth heterostrophe embryo of about a whorl and a half with immersed tip, succeeded by four or five whorls very gradually increasing in size.

Spire whorls flattish to slightly convex, but, as the suture is well and at the same time suddenly impressed, the whorls have a somewhat more convex appearance near the suture. Whorls furnished with numerous fine and close costae, approximately about 16 to 20 to a whorl, fine spiral threads are also present showing in the interstices, giving rise to a clathrate ornament. The above sculpture is not always so well marked on the body whorl; this feature in some cases appears to be due to deformity in growth, either from fracture and consequent injury, or other interfering causes against the usual regularity of growth.

Aperture oval, columella straight, outer lip thin, and after ascending descends slightly before joining the penultimate whorl.

Dimensions.—Length, 2 mm.; breadth, .75 mm.

Locality.—Off Rhyll, Phillip Island, Western Port, from shell sand, dredged from about four fathoms (Gatliff and Gabriel).

Observations.—This well marked and pretty little species appears quite distinct from any described Australian species, but may, perhaps, be compared with Turbonilla scalarina, Brazier,

from Watson's Bay, Sydney. Our shell is, however, apparently of a more robust habit for its size, of fewer whorls, with distinct ornament in the interstices, and judging by Mr. C. Hedley's figure, the costae in ours are more numerous, and run straighter up the shell. These differences seem to amply justify the treatment of our shell as a distinct species, though it might be remarked that the description of the Sydney shell by Mr. Brazier is a very meagre one indeed, and some features noticeable in the figured specimen appear to have had no consideration whatever by him.

Type in Mr. Gatliff's collection.

Odostomia metcalfei, sp. nov. (Pl. XXI., Fig. 3.)

Shell small, biconic, spire longer than the aperture, with a somewhat obtuse apex. Heterostrophe embryo of about a whorl and a half with immersed tip, the extreme obtuse apical portion being so much smaller than the succeeding whorl that a lateral aspect shows a distinct broad tabulation at this part of the shell.

Whorls, three to four, somewhat convex with a distinct suture, and a narrow margin running parallel to and a little below it, a slight inclination to tabulation at the suture. Whorls faintly longitudinally, striate, shell thin, translucent, and of a milky-white colour.

Aperture ovate, slightly effuse anteriorly, furnished on the columellar side at the middle of the aperture with one strong tooth-like plait; outer lip thin.

Dimensions.—Length, 2.5 mm., nearly; breadth, 1.25 mm.; length of aperture, 1 mm.

Locality-—Flinders, Western Port (G. B. Pritchard).

Observations.—Mr. Angas, in his list of South Australian shells, published in the "Proceedings of the Zoological Society of London for 1878," gives, on p. 866, the name of Odostomia eburnea, and refers to it as a manuscript name of Metcalfe in the British Museum, and as having been collected by Professor Tate from Holdfast Bay. Our Victorian shell was named for one of us by Professor Tate as O. eburnea; but we have been unable to find any figure or description of that species, and not being

¹ Proc. Linn. Soc. N. S. Wales, 1894, vol. ix., pl. xiv., f. 5.

sure that our shell is necessarily the same as that in the British Museum, we have named it as above.

Type in G. B. Pritchard's private collection.

Stylifer immaculata, sp. nov. (Pl. XXI., Fig. 2.)

Shell small, pyramidal, consisting of about five and a half whorls, with a fairly well marked though small styliform apex.

The apex and spire whorls, with the exception of the penultimate, are of an opaque milky white colour, but the penultimate and body whorls are translucent and hyaline.

The whole shell is perfectly smooth and highly lustrous; the whorls are only very slightly convex, and the suture is not deeply impressed, the body-whorl is subangulate at the periphery and rapidly sloping to the base.

Aperture ovate, slightly effuse anteriorly; inner lip a little thickened, outer lip strong, also a little thickened, but thin at the edge, with a strong forwardly arching margin between the base and the posterior suture, the maximum protrusion being medial, or a little nearer the anterior end.

Dimensions.—Length, 3 mm., nearly; breadth, 1.5 mm.; length of aperture slightly over 1 mm.; breadth of aperture, .75 mm.

Locality.—Shoreham, Western Port.

Observations.—This species is distinctly an adult form, and though of such small size, all its characters appear well matured, so that the above remarks and accompanying figure should enable it to be easily identified. We are not at present aware of any sufficiently closely related species to necessitate a comparison.

Type in Mr. Gatliff's collection.

Marginella whani, sp. nov. (Pl. XXI., Figs. 5, 6.)

Description.—Shell cylindrical, smooth, fairly solid, spire immersed. Opaque white. Aperture long, narrow, widening anteriorly, continues to the apex of the body whorl. Outer lip thickened, not dentate within; this thickening, which has a distinct porcellanous appearance, continues anteriorly to the columella, a little above the plaits, it also continues well defined over the apex on to the columella, which bears anteriorly three strong and well defined obliquely ascending plaits.

Dimensions.—Length, 11 mm.; breadth, 5 mm.

Locality.—Port Fairy (Rev. T. Whan), Carrum Beach, Port Phillip (Thos. Worcester).

Observations.—Its nearest specific affinity in our waters is M. ovulum, Sowerby; but that species has four plaits, is shorter, and not so cylindrical, and the aperture anteriorly is not so wide. We have pleasure in naming it after the discoverer.

Type in Mr. Gatliff's collection.

DESCRIPTION OF PLATES XX. AND XXI.

PLATE XX.

- Fig. 1.—Natica subcostata, T. Wds.
 - ,, 2.—The same.
 - ,, 3.—The same, operculum.
 - " 4.—Natica shorehami, n. sp.
 - " 5.—Erato denticulata, n. sp.

PLATE XXI.

- Fig. 1.—Turbonilla (Ondina) micra, n. sp.
 - " 2.—Stylifer immaculata, n. sp.
 - " 3.—Odostomia metcalfei, n. sp.
 - ,, 4.—Turbonilla brevis, n. sp.
 - " 5.—Marginella whani, n. sp.
 - ,, 6.—The same.

(Note.—All the figures are much enlarged).